

AMENDMENTS TO THE CLAIMS:

1. (Currently amended) A method of detecting apoptosis, comprising:
preparing a sample without cells ~~from which cells have been removed~~; and detecting
quantifying an antigen comprising at least one member selected from the group
consisting of at least one of nucleolin and PARP-1 full-length poly(ADP-ribose)
polymerase (PARP-1) in the sample, to detect apoptosis;
wherein quantifying comprises reacting an antibody with the sample.
2. (Original) The method of claim 1, wherein the sample is blood, serum,
plasma, tissue, tissue culture medium or sputum.
3. (Original) The method of claim 1, wherein the ~~detecting~~ quantifying further
comprises membrane disruption.
4. (Currently amended) The method of claim 1, wherein the ~~detecting is
detecting nucleolin, and the detecting nucleolin comprises detecting a nucleolin-binding
molecule-nucleolin-complex~~ antigen comprises nucleolin.
5. (Currently amended) The method of claim 4, wherein the ~~nucleolin-binding
molecule~~ antibody comprises an anti-nucleolin antibody.
6. (Currently amended) The method of claim 5, wherein the anti-nucleolin
antibody is selected from the group consisting of p7-1A4, sc-8031, sc-9893, sc-9892,
4E2 and 3G4B2 antibodies.
- 7-9. (Canceled)
10. (Currently amended) The method of claim 1, wherein the ~~detecting is
detecting PARP-1, and the detecting PARP-1 comprises detecting a PARP-1 binding
molecule-PARP-1-complex~~ antigen comprises PARP-1.

11. (Currently amended) The method of claim 10, wherein the ~~PARP-1 binding molecule~~ antibody comprises an anti-PARP-1 antibody.

12. (Currently amended) The method of claim 11, wherein the anti-PARP-1 antibody is selected from the group consisting of sc-1562, sc-8007, sc-1561, sc-1561-Y and sc-7150 antibodies.

13. (Currently amended) A method of detecting excessive apoptosis in a subject, comprising:

preparing a blood sample from which cells have been removed; and ~~detecting~~
quantifying a reduction in an antigen comprising at least one of nucleolin and
~~PARP-1 in the sample, to detect excessive apoptosis;~~

wherein quantifying comprises reacting an antibody with the blood sample.

14. (Original) The method of claim 13, wherein the subject is suspected of having a disease selected from the group consisting of Acquired Immunodeficiency Syndrome, a neurodegenerative disease, an ischemic injury, an autoimmune disease, a tumor, a cancer, a viral infection, an acute inflammatory condition and sepsis.

15. (Original) The method of claim 13, wherein the subject is suspected of having cancer.

16. (Original) The method of claim 15, wherein the cancer is selected from the group consisting of endocervical adenocarcinoma, prostatic carcinoma, breast cancer, leukemia and non-small cell lung carcinoma.

17-39. (Canceled.)

40. (Original) A method of detecting apoptosis in a cell culture, comprising the method of claim 1.

41. (Currently amended) The method of claim ~~41~~40, wherein the cell culture is grown in a bioreactor.

42. (New) A method of detecting apoptosis, comprising:
- preparing a sample comprising apoptotic bodies; and
- detecting an antigen comprising at least one member selected from the group consisting of nucleolin and full-length poly(ADP-ribose) polymerase (PARP-1) in the sample, to detect apoptosis;
- wherein detecting comprises reacting an antibody with the sample.
43. (New) The method of claim 42, wherein the sample is blood, serum, plasma, tissue, tissue culture medium or sputum.
44. (New) The method of claim 42, wherein the detecting further comprises disrupting the apoptotic bodies.
45. (New) The method of claim 42, wherein the antigen comprises nucleolin.
46. (New) The method of claim 42, wherein the antibody comprises an anti-nucleolin antibody.
47. (New) The method of claim 46, wherein the anti-nucleolin antibody is selected from the group consisting of p7-1A4, sc-8031, sc-9893, sc-9892, 4E2 and 3G4B2 antibodies.
48. (New) The method of claim 42, wherein the antigen comprises PARP-1.
49. (New) The method of claim 42, wherein the antibody comprises an anti-PARP-1 antibody.
50. (New) The method of claim 49, wherein the anti-PARP-1 antibody is selected from the group consisting of sc-1562, sc-8007, sc-1561, sc-1561-Y and sc-7150 antibodies.